

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: \_\_\_\_\_ Examiner #: \_\_\_\_\_ Date: \_\_\_\_\_  
Art Unit: \_\_\_\_\_ Phone Number 30 \_\_\_\_\_ Serial Number: \_\_\_\_\_  
Mail Box and Bldg/Room Location: \_\_\_\_\_ Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: \_\_\_\_\_

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

*\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

## STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher <u>D. Schreiber</u>	NA Sequence (#) _____	STN _____
Searcher Phone # <u>308-4292</u>	AA Sequence (#) <u>3</u>	Dialog _____
Searcher Location: <u>CM1 12E18</u>	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up _____	Bibliographic _____	Dr.Link _____
Date Completed: <u>6/19</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>5</u>	Fulltext _____	Sequence Systems <u>CompuGen</u>
Clerical Prep Time _____	Patent Family _____	WWW/Internet _____
Online Time: <u>6</u>	Other _____	Other (specify) _____



GenCore version 4.5  
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OM protein - protein search, using sw model

Run on: June 18, 2001, 15:29:32 ; Search time 50.45 Seconds

(without alignments)  
514.412 Million cell updates/sec

Title: US-09-653-755A-4

Perfect score: 2427

Sequence: 1 EVQIQQSPELVKKPGASVMI.....RHEGIKNYIKTKTSRSPGK 454

Scoring table:

BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 390729 seqs, 57163235 residues

Total number of hits satisfying chosen parameters: 390729

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Listing first 45 summaries

Database :

A.GeneSeq\_0401:\*

1: /SID56/gcgdata/geneSeq/geneSeq/AA1980.DAT:\*  
2: /SID56/gcgdata/geneSeq/geneSeq/AA1981.DAT:\*  
3: /SID56/gcgdata/geneSeq/geneSeq/AA1982.DAT:\*  
4: /SID56/gcgdata/geneSeq/geneSeq/AA1983.DAT:\*  
5: /SID56/gcgdata/geneSeq/geneSeq/AA1984.DAT:\*  
6: /SID56/gcgdata/geneSeq/geneSeq/AA1985.DAT:\*  
7: /SID56/gcgdata/geneSeq/geneSeq/AA1986.DAT:\*  
8: /SID56/gcgdata/geneSeq/geneSeq/AA1987.DAT:\*  
9: /SID56/gcgdata/geneSeq/geneSeq/AA1988.DAT:\*  
10: /SID56/gcgdata/geneSeq/geneSeq/AA1989.DAT:\*  
11: /SID56/gcgdata/geneSeq/geneSeq/AA1990.DAT:\*  
12: /SID56/gcgdata/geneSeq/geneSeq/AA1991.DAT:\*  
13: /SID56/gcgdata/geneSeq/geneSeq/AA1992.DAT:\*  
14: /SID56/gcgdata/geneSeq/geneSeq/AA1993.DAT:\*  
15: /SID56/gcgdata/geneSeq/geneSeq/AA1994.DAT:\*  
16: /SID56/gcgdata/geneSeq/geneSeq/AA1995.DAT:\*  
17: /SID56/gcgdata/geneSeq/geneSeq/AA1996.DAT:\*  
18: /SID56/gcgdata/geneSeq/geneSeq/AA1997.DAT:\*  
19: /SID56/gcgdata/geneSeq/geneSeq/AA1998.DAT:\*  
20: /SID56/gcgdata/geneSeq/geneSeq/AA1999.DAT:\*  
21: /SID56/gcgdata/geneSeq/geneSeq/AA2000.DAT:\*  
22: /SID56/gcgdata/geneSeq/geneSeq/AA2001.DAT:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1839.5	75.8	468	12	Monoclonal antibody
2	1835	75.6	469	14	Monoclonal antibody
3	1789.5	73.7	9	P83200	Sequence encoded b
4	1693.5	69.8	447	10	Chimeric antibody
5	1670.5	68.8	477	15	T84.12 Heavy chain
6	1594.5	65.7	464	16	Mab 55.1 heavy chain
7	1590.5	65.5	445	16	Mab 55.1 heavy chain
8	1564.5	64.5	464	19	Anti-Fas Mab HFE7A
9	1564.5	64.5	464	21	Mouse anti-Fas ant
10	1564.5	64.5	464	21	Murine anti-Fas an
11	1559	64.2	453	20	Antibody F19 chime

12	1550.5	63.9	472	20	Y50157
13	1550	63.9	465	16	R66758
14	1548	63.8	454	14	R30774
15	1493.5	61.5	470	21	B08026
16	1489.5	61.4	472	20	Y50166
17	1466.5	60.4	449	14	R43339
18	1466.5	60.4	449	19	W49816
19	1461.5	60.2	470	21	W90933
20	1459.5	60.1	470	21	W90934
21	1458.5	60.1	470	19	W83037
22	1458.5	60.1	470	21	B14779
23	1458.5	60.1	470	21	W90929
24	1458.5	60.1	470	21	W90935
25	1457.5	60.1	470	19	W83036
26	1457.5	60.1	470	21	B14776
27	1457.5	60.1	470	21	W90926
28	1456.5	60.0	652	19	W48650
29	1455.5	60.0	464	18	W14941
30	1455.5	60.0	464	18	W14938
31	1455.5	60.0	468	13	R28808
32	1451.5	59.8	481	13	R24442
33	1451.5	59.8	595	20	W86003
34	1447	59.6	467	22	W86210
35	1446	59.6	463	18	W14939
36	1446	59.6	463	18	W14940
37	1439.5	59.3	470	21	W90936
38	1434	59.1	448	14	R43673
39	1433	59.0	448	17	R97376
40	1429.5	58.9	468	20	W85689
41	1429.5	58.9	711	20	W85692
42	1427.5	58.8	476	14	R31023
43	1427	58.8	452	20	Y29458
44	1427	58.8	452	21	B30322
45	1427	58.8	452	21	Y77766

#### ALIGNMENTS

RESULT 1	
R13061	
ID	R13061 standard; Protein; 468 AA.
XX	
AC	R13061;
XX	
DT	03-OCT-1991 (first entry)
XX	
DE	Monoclonal antibody OK3T heavy chain.
XX	
KW	OK3T; light chain; humanised antibodies; CDR-grafting.
XX	
OS	Mus musculus.
XX	
FH	Key
FT	Peptide
FT	Protein
FT	
XX	
PN	W09109967-A.
XX	
PD	11-JUL-1991.
XX	
PF	21-DEC-1990; 90WO-GH02017.
XX	
PR	21-DEC-1990; 90WO-GH02017.
PR	21-DEC-1989; 89GB-0028874.
XX	
PA	(CELL-) CELLTech LTD.
PI	Adair JR, Athwal DS, Emtage JS;
XX	
DR	WPI; 1991-222915/30.

Chimeric mouse/hum  
Anti-tobacco mosai  
H52H4-160 murine a  
A dimeric anti-CD2  
Human reshaped F19  
Completely humanis  
Amino acid sequenc  
Humanised anti-Fas  
Humanised anti-Fas  
Anti-Fas humanised  
Humanised anti-Fas  
Humanised HFE7A de  
Humanised anti-Fas  
Anti-Fas humanised  
Humanised anti-Fas  
Heavy chain of hma  
3F4 Human IgG4 exp  
Murine anti-porcini  
pre-5A8 humanised  
Sequence of antio  
Anti-574 single ch  
Human immune syste  
3F4 (Chimeric) hum  
3F4 (Chimeric) hum  
Humanised HFE7A de  
Mouse anti-bovine  
Murine anti-BGH MA  
D9D10 heavy chain  
Morbidi fusion pro  
Antibody D heavy c  
Recombinant immuno  
Humanised anti-IL-  
Humanised anti-IL-



CC	residue with a different side chain: 318 (changed to Val) 330 and
CC	332 (changed to Gln). Those with altered lytic properties, as
CC	compared with unmodified Ab may have an altered CH2 domain where
CC	residue 297 of the heavy chain has been changed to Ala.
CC	
SQ	Sequence 341 AA:
	Query Match 73.7%; Score 1789.5; DB 9; Length 341;
	Best Local Similarity 98.5%; Pred. No. 2,6e-108;
	Matches 336; Conservative 0; Mismatches 0; Indels 5; Gaps
QY	119 AKTTPESVTVLARGCGDGTGSSSTVLGLCYKGRPESEVTVTMNSGSLSSVHFPALDSG 178
Db	1 akthpsvpylapygcgdltsvllgclvykgyfpeesvltvtnsgslssvhlfpallgsq 60
QY	179 LYTMSSSVTPPSSWMPQQTVCVAHPASSTVWDKKLEPSGPISTINPCPKCKCPA 238
Db	61 lymsssvtpsswmpsqvltvcvahnpassctvdkkilepsgrstlnpcppckckcpa 120
QY	239 PNLGGPSVFIFPPNKKIDYLMISLTPKVTICVVDVSEDDPDV----QISWFWNNVEVHT 293
Db	121 pnlggpsviflppnkkidvlymlsltpkvtcvvvdvseddprvdpqgslsvfmnvvht 180
QY	294 AQCTQTHREDYNSTRVVSSTLPIDQHDMWGKGEKCKVNNKDLPSPIERTISKIGLVRA 353
Db	181 aqctqhredynstrvvsstlpidqhdwmwgskelckvnnkdilpspiertisklglvrap 240
QY	354 QVYTLPPPAQQLSRKQVSLNLCVAVGFPNGDISVEMTNSNHTENKQDPAVLDSDGSYFI 413
Db	241 qvylpppaqqlsrkqvslnlcavlgfpngdisvemtnghtenkykdlavldsdgsyfi 300
QY	414 YSKLNMTSKWEKTDSPSCNVHREGLKNNYLLKKTISRSPGK 454
Db	301 ysklnmtskwektdspscnvhreglknnyllkktisrsgpk 341
RESULT 4	
P93037	
ID	P93037 standard; protein; 447 AA.
AC	P93037;
XX	
XX	14-MAR-1990 (first entry)
XX	
DE	Chimeric antibody heavy chain variable region.
OS	Mus.
XX	
KW	KSI/4; chimeric antibody; heavy chain variable region;
PN	EP338767-A.
XX	
PD	25-APR-1989.
XX	
PF	18-APR-1989; 89EP-0303814.
XX	
PR	21-APR-1988; 88US-0184522.
XX	
PA	(ELIL ) ELI LILLY AND CO.
XX	
PA	Beavers LS, Bumol TF, Gadeki RA, Weigel BJ;
DR	WPI; 1989-311203/43.
XX	
DR	N-PSDB; N91659.
XX	
XX	
PS	Claim 6; page 50; 89pp; English.
XX	
XX	The sequence encodes the heavy chain of MAb KSI/4, used to
CC	construct mouse/human chimeric antibodies. KSI/4 is a murine antibody
CC	

CC which binds to surface antigens on adenocarcinoma cells and the use of  
XX human C regions avoids immunological problems during treatment.  
SQ Sequence 447 AA;

Query Match 69.8%; Score 1693.5; DB 10; Length 447;  
Best Local Similarity 69.7%; Pred. No. 5.5e-102;  
Matches 317; Conservative 55; Mismatches 74; Indels 9; Gaps 4;

QY 1 EVOLQSGPELVKPGASVWISCTSAVTETENTHWVKOSHGSLEWIGINPYGGSIF 60  
DB 1 qqlvsgpeikpgstvkscasgylftngmawkkpkygylkwmgynltgpey 60  
QY 61 SPFKGKATLVYDKSSSTAYMELRS-LTSDSAVYYCARAGAYRDYWGQTTLV 119  
DB 61 addfkgrfafsletscastalqigqpnmrtnatlytcvrlsk--gdlywqgltcvssa 118  
QY 120 KTTPEVYPLAPCGDGTGSSVTLGCLVKGYPPESTVWVNSGSLSSVHTFPALQSL 179  
DB 119 ktapsvyplapvcgdtgssvltgclvkgypfepvrltwnsgslssgvtlfpavtgsd 178  
QY 180 YWSSSVYVPPSSVWPSQYVTCVAHPASSTVDKLEPGSISTINPCPPCKECHKCAP 239  
DB 179 yltsssvltvstlwpqsltcnvahpasstkvdkklepgrp--tlkpcpc---kcpap 232  
QY 240 NLEGGSVTFEPNIDVIMISLTPEKTCVYVDSEDDPDVOISWPNVNEVHTAQTOT 299  
DB 233 nllgspvflfpkikdvlimislplvtcvvdvdsedpovqslswtvmnevhtlaqtch 292  
QY 300 REDYNTIRVSTLPIQHODWMSGKEFKCKVNNKDLPSPIERTISIKGLVAPQVYILP 359  
DB 293 redynstlrvsalpqlhqdmsgkefkckvnnkdlpapiertlspkgsvtapqyvlp 352  
QY 360 PRAEQLSRKDVSLTCLVGFNPQDISEWTSNGHTEENTKDTAPVLDSDGSFTYISKL 419  
DB 360 preeentkqkqvtlcmvtdlfpmedlyvewtngktehlykntepvldsdgsyfymskly 412  
QY 420 KTSKWEKTSFSCNVRHEGLKNYLTKTISRSPGK 454  
DB 413 ekknwernyscsvveglnhntktsfstrpgk 447

RESULT 5  
R47450  
ID R47450 standard; Protein: 477 AA.  
XX R47450;  
AC R47450;  
XX  
DT 24-JUN-1994 (first entry)  
XX  
XX T84.12 Heavy chain.  
DE  
KW Chimeric; carcinoembryonic antigen; CCA; murine; mouse; constant;  
KW region; transform; myeloma cell; light chain; tumour.  
OS Synthetic.  
XX  
XX W09325237-A.  
XX  
XX 23-DEC-1993.  
XX  
XX 15-JUN-1993; 93WO-US05709.  
XX  
XX 15-JUN-1992; 92US-0904074.  
PR  
XX  
XX (CITY ) CITY OF HOPE.  
PA (YANG/) YANG Y.  
XX  
XX Fischer R, Paxton R, Shively JE, Wu A, Yang YH;  
PI Yang YH;  
XX  
XX WPI: 1994-007204/01.  
DR

DR N-PSDB; Q54652.  
XX  
PT New chimaeric T84.12 antibody active against carcinoembryonic  
XX antigen - has murine variable and human constant regions, also  
PT DNA encoding it and transformed myeloma cells  
XX

PS Claim 1; Page 17; 27pp; English.

CC The sequences (Q54651-52) show the light and heavy chain CDNA  
CC of murine T84.12. The T84.12 antibody is directed against the  
CC tumour marker carcinoema embryonic antigen, and is useful for  
CC tumour imaging and immunotherapy.  
CC The amino acid sequence given in the specification has been  
CC incorrectly identified as a nucleic acid sequence, therefore  
CC unacceptable characters have been represented as an 'N'.  
CC The amino acid sequence given below has been derived from the  
CC cDNA, by the indexer.  
XX

SQ Sequence 477 AA;

Query Match 68.8%; Score 1670.5; DB 15; Length 477;  
Best Local Similarity 69.0%; Pred. No. 1.8e-100;  
Matches 316; Conservative 54; Mismatches 75; Indels 13; Gaps 5;

QY 1 EVOLQSGPELVKPGASVWISCTSAVTETENTHWVKOSHGSLEWIGINPYGGSIF 60  
DB 29 evklvsgggtfkkpgslkscasgylftngmawkkpkygylkwmgynltgpey 87  
QY 61 SPFKGKATLVYDKSSSTAYMELRS-LTSDSAVYYCARAGAY---PDYWGQTTLV 116  
DB 88 vdsvkgrftrsdnarnllylqmslrsedtamycari--dyg999gfygwgqgtlatv 145  
QY 117 SSKTTPESVYPLAPCGDGTGSSVTLGCLVKGYPPESTVWVNSGSLSSVHTFPALQ 176  
DB 146 saaktapsvyplapvcgdtgssvltgclvkgypfepvrltwnsgslssgvtlfpavt 205  
QY 177 SGLYSSSVYVPPSSVWPSQYVTCVAHPASSTVDKLEPGSISTINPCPPCKECHK 236  
DB 206 sdlyltsssvltvstlwpqsltcnvahpasstkvdkklepgrp--tlkpcpc---kc 259  
QY 237 PAPNLEGGPSVTFEPNIDVIMISLTPEKTCVYVDSEDDPDVOISWPNVNEVHTA 296  
DB 260 papnllgspvflfpkikdvlimislplvtcvvdvdsedpovqslswtvmnevhtla 319  
QY 297 QTHREDYNTIRVSTLPIQHODWMSGKEFKCKVNNKDLPSPIERTISIKGLVAPQV 356  
DB 320 qthredynstlrvsalpqlhqdmsgkefkckvnnkdlpapiertlspkgsvtapqy 379  
QY 357 ILPPAEOLSRKDVSLTCLVGFNPQDISEWTSNGHTEENTKDTAPVLDSDGSFTYIS 416  
DB 380 vllppeeentkqkqvtlcmvtdlfpmedlyvewtngktehlykntepvldsdgsyfy 439  
QY 417 LNMKTSKWEKTSFSCNVRHEGLKNYLTKTISRSPGK 454  
DB 440 lrvckknwernyscsvveglnhntktsfstrpgk 477

RESULT 6  
R76088  
ID R76088 standard; Protein: 464 AA.  
XX  
XX R76088;  
AC R76088;  
XX  
DT 21-NOV-1995 (first entry)  
XX  
XX MAb 55.1 heavy chain.  
DE  
XX  
XX Antigen binding structure; complementarity determining region; CDR;  
KW CA55.1; colorectal cancer; tumor-associated antigen; hybridoma;  
KW monoclonal antibody; MAb; immunotherapy; therapy; diagnosis;  
KW transgenic animal; transgenic plant; antibody engineering;  
KW humanized antibody; immunotoxin.  
KW

```
XX OS Mus sp.
XX FH Key
XX FT Peptide
XX FT 1..19
XX FT /label= Sig-peptide
XX FT 20..464
XX FT Protein
XX FT /label= Mat_protein
XX FT /note= "Claim 3, page 97-98"
XX PN WO9515382-A.
XX PD 08-JUN-1995.
XX PE 29-NOV-1994; 94WO-GB02610.
XX PR 03-JUN-1994; 94GB-0011089.
XX PR 03-DEC-1993; 93GB-0024819.
XX (ZENE ) ZENECA LTD.
XX PA Blakley DC, Boot C, Copley CG, Hall SM, Paterson DS;
XX PI Rose MS, Wright AF;
XX DR WPI: 1995-215262/28.
XX DR N-PDB: Q94037.
XX PT Antigen binding structures containing CDRs recognising the CA55.1
XX PT antigen - produced by hybridomas and host cells, for use in the
XX PT diagnosis and therapy of cancer
XX PS Disclosure; Fig.15; 121pp; English.
XX CC MAb 55.1 (ECCACC 93081901) recognises the colorectal tumor-associated
XX CC antigen CA55.1. cDNAs for the heavy (Q94037) and light (Q94036)
XX CC chains of 55.1 were isolated, and F(ab)'2, F(ab)'2, Fv, scFv or
XX CC V-min humanized 55.1 constructs have been expressed in myeloma
XX CC cells and E. coli.
XX SO Sequence 464 AA;

Query Match 65.7%; Score 1594.5; DB 16; Length 464;
Best Local Similarity 66.5%; Pred. No. 1.4e-95;
Matches 304; Conservative 55; Mismatches 83; Indels 15; Gaps 6;

QY 1 EVQLQSGPELVKPGASVMISCRYSATYFTENTYHWVKQSHGESLEWIGINPYGGSIF 60
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 20 qvqlqpgaaelvkpgasvqlskasgyftlgylwhvqrpqgglewlgenvpstsgrsdy 79
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
QY 61 SPKFKGATLTVDKSSSTAYMELRLTSEDSAVYYCAR-RAGAY--YFDYWGQGTTLTVS 117
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 80 nekfkakcltvdksstlaymqlsltsedsavyycareraygyddandyygqstsvls 139
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
QY 118 SAKTTPSPVPLAPGCGDTTSSVTLGCLVKGYPEPSTVTVWNSGSLSSVHTPALLQS 177
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 140 saktlppsvyplapgsaaqtsmvtlglclvkgyfpepvtlwnsgslssgyhtfpavlg 199
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
QY 178 GLYTMSSSVTPSSSTWPSQVTCVAHPASSTYVDKRLPEPGPISTINPCPCKCKHCP 237
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 200 dlylsssvtvpssstmpsetlcnvahpssstkvdkiivp-----tdc-gckpc-ict 250
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
QY 238 APNLEGGBSVFIFPPNKKIDVIMLSLTPEKVTGVVVDSEDDPDVQISWENVNVEHTAQT 297
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 251 vpevs---svflfppkpkdviltltpkvtcvcvvdlskddpevgqsfwtddevhtlaqt 307
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
QY 298 THRDVNSTIVVSTLPTQHDMMKSGKFEKCKVNNKKDLPSPLEPRTISIKGLVAPQYVI 357
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 308 preeqfnstsvseipumqdwlngefkcrvnsaafraplektskgrkrpapyvt 367
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
QY 358 LPPPAEQLSRKDVSLTCLVGFNPGDISVEWTSNGHTEENKDTAPVADSDGSVFYISKL 417
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 368 lpppkeqmakakvalctmctdfpfeditvewqmwngpaenyknqgrindtqgsyfvygskl 427
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
```

```
QY 418 NMKTSKMEKTSDFSCGNVRHEGLKANYLLKKTISRSPGK 454
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 428 nvqksnweagntftscvllghnhhteksishspgk 464

RESULT 7
ID R76085 standard; Peptide; 445 AA.
XX AC R76085;
XX DE 21-NOV-1995 (first entry)
XX DE MAb 55.1 heavy chain.
XX DE
XX KW Antigen binding structure; complementarity determining region; CDR:
XX KW CA55.1; colorectal cancer; tumor-associated antigen; hybridoma;
XX KW monoclonal antibody; MAb; immunotherapy; therapy; diagnosis;
XX KW transgenic animal; transgenic plant; antibody engineering;
XX KW humanized antibody; immunotoxin.
XX OS Mus sp.
XX PN WO9515382-A.
XX PD 08-JUN-1995.
XX PE 29-NOV-1994; 94WO-GB02610.
XX PR 03-JUN-1994; 94GB-0011089.
XX PR 03-DEC-1993; 93GB-0024819.
XX (ZENE ) ZENECA LTD.
XX PA Blakley DC, Boot C, Copley CG, Hall SM, Paterson DS;
XX PI Rose MS, Wright AF;
XX DR WPI: 1995-215262/28.
XX DR
XX PT Antigen binding structures containing CDRs recognising the CA55.1
XX PT antigen - produced by hybridomas and host cells, for use in the
XX PT diagnosis and therapy of cancer
XX PS Claim 3; Page 97-98; 121pp; English.
XX CC An antigen binding structure is based on the CDRs (given in R76078-
XX CC 84) of the heavy (R76085) and light (R76086) chains of MAb 55.1
XX CC (ECCACC 93081901), which recognises the colorectal tumor-associated
XX CC antigen CA55.1. It is optionally humanized and in the form F(ab)'2,
XX CC F(ab)'2, Fv, scFv or V-min, and is produced in transgenic
XX CC animals or plants.
XX SO Sequence 445 AA;

Query Match 65.5%; Score 1590.5; DB 16; Length 445;
Best Local Similarity 66.5%; Pred. No. 2.5e-95;
Matches 304; Conservative 54; Mismatches 84; Indels 15; Gaps 6;

QY 1 EVQLQSGPELVKPGASVMISCRYSATYFTENTYHWVKQSHGESLEWIGINPYGGSIF 60
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 1 qvqlqpgaaelvkpgasvqlskasgyftlgylwhvqrpqgglewlgenvpstsgrsdy 60
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
QY 61 SPKFKGATLTVDKSSSTAYMELRLTSEDSAVYYCAR-RAGAY--YFDYWGQGTTLTVS 117
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 61 nekfkakcltvdksstlaymqlsltsedsavyycareraygyddandyygqstsvls 120
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
QY 118 SAKTTPSPVPLAPGCGDTTSSVTLGCLVKGYPEPSTVTVWNSGSLSSVHTPALLQS 177
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db 121 saktlppsvyplapgsaaqtsmvtlglclvkgyfpepvtlwnsgslssgyhtfpavlg 180
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
QY 178 GLYTMSSSVTPSSSTWPSQVTCVAHPASSTYVDKRLPEPGPISTINPCPCKCKHCP 237
   :|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
```





QY	178	GLTMSSTVTPSSSTWSPQWYTCQSVAPASSTVYDKKLEPSPGISTININCPCKECHKCP	237
Db	200	dlytlssstvlvpsstlwpstqvtlcvnapastkvdckllyp-----rdc-gckpc-ict	250
QY	238	APNLGGGSVYTFPPPNKIKDVLMLSLPFRKVCVYVDVSEDDPDLQISMFVNNVEVHAQTC	297
Db	251	vpevs---svelfppkpkdvltlfrkvcvayvdlskddpewgfswfdvdevhnaqg	307
QY	298	THREDYNSTIVSTLPIQIHDMMSGKEFKCKVNNKDLPSIERITSKIKGLVAPQVYI	357
Db	308	preedinfstfsvselplmbhqwvlnqgkfcorynsaafpjakltskckgxrpkapqytc	367
QY	358	LPAPAEOLSRKDDLTCLVYGFNGDISVMTSTSGHTEENYKQTAVALVSDSGSYFLSKL	417
Db	368	lpppegmakakvslcmldlfrpedltvewqngpaeaykntcpdlmngsyfyskl	427
QY	418	NMKTSGWEKTDSPFCNVNHEGLKNVYUKKTISSPCK	454
Db	428	nvqksnweagntfctscvlnheglhnhhekslnspgk	464
RESULT	10		
ID	W90897	W90897 standard; protein; 464 AA.	
AC	W90897;		
XX	08-AUG-2000	(first entry)	
DT			
XX			
DE		Murine anti-Fas antibody HFE7A heavy chain protein.	
XX			
KM	Fas: antibody; murine; anti-inflammatory; anti-anemic; antidiabetic;		
KM	anti-allergic; anti-arthritis; antiviral; immunomodulatory; cardiatic;		
KM	dermatological; immunosuppressive; thyromimetic; antitumematic; anti-Fas		
KM	neurotropic; antinfertility; neuroprotective; antiarteriosclerotic;		
KM	hepatotropic; humanized; apoptosis; systemic lupus erythematosus; HFE7A;		
KM	Hashimoto disease; rheumatoid arthritis; graft versus host disease;		
KM	Strogen's syndrome; anemia; Addison's disease; scleroderma; sterility;		
KM	Goodpasture syndrome; Crohn's disease; sterility; myasthenia gravis;		
KM	multiple sclerosis; Basedow's disease; thrombopenia purpura; allergy;		
KM	insulin dependent diabetes mellitus; arteriosclerosis; myocardiitis;		
KM	cardiomyopathy; glomerulonephritis; hepatitis; transplant rejection.		
XX			
OS	Mus musculus.		
XX			
PN	EP990663-A2.		
XX			
PD	05-APR-2000.		
XX			
PF	29-SEP-1999;	99EP-0307711.	
XX			
PR	30-SEP-1998;	98JP-0276881.	
XX			
PR	30-SEP-1998;	98JP-0276882.	
XX			
PA	(SANY ) SANKYO CO LTD.		
XX			
PI	Serizawa N, Hatuyama H, Nakahara K, Tamaki I, Takahashi T;		
XX			
DR	WPI: 2000-258930/23.		
XX			
DR	N-PSDB; A11546.		
XX			
PT	New humanized anti-Fas antibody, useful for treating or preventing e.g.		
PT	inflammatory or autoimmune disease, induces apoptosis selectively in		
PT	cells with abnormal Fas-Fas ligand systems		
XX			
XX			
PS	Example reference 4; Page 100-102; 263pp; English.		
CC			
CC	This invention describes a novel humanized anti-Fas antibody-like		
CC	molecule (I) that, induces apoptosis in cells with an abnormal Fas/Fas		
CC	ligand system, by binding to Fas on the cell surface, and prevents		
CC	apoptosis in cells with a normal system, by inhibiting binding between		
CC	Fas and its ligand. The products of the invention have anti-inflammatory		

CC anti-anemic, antidiabetic, anti-allergic, anti-arthritis, antiviral,  
 CC immunomodulatory, dermatological, immunosuppressive, thyromimetic,  
 CC antirheumatic, nephrotropic, antineoplastic, neuroprotective,  
 CC antiarteriosclerotic, cardiant and hepatotropic activity (1) induce  
 CC apoptosis by binding to cell surface Fas or inhibit it by competitive  
 CC inhibition of ligand binding. (1) are used to treat and/or prevent  
 CC diseases associated with the Fas/Fas ligand system, especially systemic  
 CC lupus erythematosus, Hashimoto disease, rheumatoid arthritis, graft  
 CC versus host disease, Sjorgen's syndrome, pernicious or hypoplastic  
 CC anemia, Addison's disease, scleroderma, Goodpasture syndrome, Crohn's  
 CC disease, autoimmune hemolytic anemia, sterility, myasthenia gravis,  
 CC multiple sclerosis, Basedow's disease, thrombopenia purpura, insulin  
 CC dependent diabetes mellitus, allergy, arteriosclerosis, myocarditis,  
 CC cardiomyopathy, glomerulonephritis, hepatitis (fulminant, chronic, viral  
 CC (B, C or D) or alcoholic), and transplant rejection. (1) selectively  
 CC inhibit apoptosis in normal cells but selectively induce it in abnormal  
 CC cells. They bind to both human and murine Fas, so can be evaluated in  
 CC murine disease models. (1) act on the active site of Fas, i.e. they mimic  
 CC the native ligand, do not induce liver disease, and have reduced risk of  
 CC inducing a human anti-murine antibody response. This sequence represents  
 CC a murine anti-Fas monoclonal antibody HFE7A heavy chain described in the  
 CC method of the invention.

XX Sequence 464 AA:

Query Match 64.5%: Score 1564.5; DB 21; Length 464;  
 Best Local Similarity 65.2%: Pred. No. 1.2e-93;  
 Matches 298; Conservative 58; Mismatches 86; Indels 15; Gaps 5;

QY 1 EVOLQSGPELVKPGASVMIISCRSTSAVFTENTVHWVKOSHGSLEWIGINPYGGSIF 60  
 :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :  
 DB 20 qvqlqgpgelvykpgasvklscasgyftfswymgwvkqpgglwlgeldpsdyltny 79  
 61 SPFRKRAITLVNKSSTAYMELRSLTSDSAAYYYCARR--AGAYFPDYWGCGTILTY 117  
 :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :  
 DB 80 nqfkgkacitlvatssitstqmsltssedavuycaarrdyannwyfdwgtgltvtvs 139  
 118 SAKTTPPSVYPLAPGCGDTTGGCTVGLKVGFPESVTVTWNGSLSSSVHFPALLOS 177  
 :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :  
 DB 140 saktfppsvyplapgsaaqtnsmwtlglcylkgyfpepyvtvtnmgsglssgvhfpavlgs 199  
 178 GLYTMSSSVTVBSSWPSQRTVCSVAHNPASSTTVDKKLEBSGPISTINPCPCKECHKCP 237  
 :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :  
 DB 200 dlytlssavtspstwpstqvtlcnvahpassstkvdkklyp-----rdc-gkpcr-ict 250  
 238 APVLBEGSPVETFPPIKIVLMISLPKTYCVVVDSEDDPDVOISMFVNNVNVHAAONO 297  
 :  
 DB 251 vpevs---svflfppkpkvltlcltpkvcvvdslskddpveqfswfdvdevhlaq 307  
 298 THREDYNSTRIVYSTLPIDHODMSGKEFKCKVNNKDLPSPIERTISKITGLVRADQVYI 357  
 :  
 DB 308 preegfnstfreselpnlhmgvlnqgkfcvcrnsaafpaplektlstkckgrypkayvt 367  
 358 LPPPAQLSRKDVSLTCLVGVGPNPDISVEMTNSNGHTENYKDTAPVLDSDGSYFIYSKI 417  
 :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :  
 DB 368 lpppqeqmakdkxslcmldtffpedltvewngqpaeykntgplmtnngsyfivyskl 427  
 418 NMKTSKWEKTDSPSCNVHRHGKLNKYLLKKTISRPGK 454  
 :  
 DB 428 nvqkswaegntfcsvlhnglhnhtekslnhsppk 464

RESULT 11  
 Y50151

ID Y50151 standard; Protein: 453 AA.

XX Y50151:

XX 31-JAN-2000 (first entry)

DE Antibody F19 chimeric mouse/human heavy chain variable region (chF19HC).

XX

KW Antibody; monoclonal; F19; fibrinogen activation protein alpha; FAP;  
 KW humanisation; complementarity determining region; CDR; CDR grafting;  
 KW reactive stroma; fibroblast; epithelial cancer; diagnosis;  
 KW immune response; framework sequence; constant region;  
 KW variable region; producibility; treatment; cancer; colorectal; lung;  
 KW breast; head; neck; ovarian; lung; bladder; pancreatic; metastasis;  
 KW detection; wound healing; skin inflammation; tumour; immunogenicity;  
 KW chimeric; heavy chain.

OS Chimeric - Mus sp.  
 OS Chimeric - Homo sapiens.

PN EP953639-A1.

PD 03-NOV-1999.

PF 30-APR-1998; 98EP-0107925.

PR 30-APR-1998; 98EP-0107925.

PA (BOEH ) BOEHRINGER INGELHEIM INT GMBH.

PI Park JE, Garin-Chesa P, Bamberger U, Leger O, Saldanha J;  
 PI Retlig WJ;

DR WPI: 1999-621833/54.

PT New antibody protein, useful for treating cancer and for imaging  
 PT presence of activated stromal fibroblasts in healing wound or inflamed  
 PT skin -

Example 1; Fig 18; 143pp; English.

CC This sequence represents the heavy chain variable region of a  
 CC chimeric mouse/human F19 antibody (chF19HC). F19 (ATCC  
 CC Accession number HB 8269) is a murine monoclonal antibody  
 CC against fibroblast activation protein alpha (FAP). FAP is a cell  
 CC surface molecule of reactive stromal fibroblasts, and its induction  
 CC is a highly consistent molecular trait of the reactive stroma of many  
 CC types of epithelial cancer. Although F19 may be useful in vitro, e.g.,  
 CC for diagnosis, its applications for in vivo use in humans are problematic  
 CC as it elicits a human anti-mouse response which reduces the efficacy of  
 CC the antibody in patients and impairs continued administration. This  
 CC chimeric antibody was humanised by joining entire murine variable regions  
 CC to human constant regions. However, humanised antibodies produced by this  
 CC method can still elicit an anti-mouse response in humans, whereas  
 CC antibodies humanised via CDR (complementarity determining region)  
 CC grafting are less immunogenic in humans. Humanised F19 antibodies are  
 CC useful for treating cancers e.g., colorectal cancers, non-small cell  
 CC lung cancers, breast cancers, head and neck cancers, ovarian cancers,  
 CC lung cancers, bladder cancers, pancreatic cancers and metastatic cancers.  
 CC They are also useful for the detection of activated stromal fibroblasts  
 CC in a healing wound, inflamed skin or a tumour in a human patient.

XX Sequence 453 AA:

Query Match 64.2%: Score 1559; DB 20; Length 453;  
 Best Local Similarity 64.6%: Pred. No. 2.7e-93;  
 Matches 297; Conservative 61; Mismatches 86; Indels 14; Gaps 4;

QY 2 VOLQSGPELVKPGASVMIISCRSTSAVFTENTVHWVKOSHGSLEWIGINPYGGSIFS 61  
 :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :  
 DB 1 vqlqsgpgelvykpgasvklscasgyftfeytlhwvrgksgslwlglnpungljpyn 60

QY 62 PRFRKRAITLVNKSSTAYMELRSLTSDSAAYYYCARRAGATYF-----DYWGCGTITF 115  
 :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :  
 DB 61 gkfggratlvkgsstaysatmelsltssedavuyfcairrlaydegldhmdywgqstvtc 120

QY 116 VSSAKTTPPSVYPLAPGCGDTTGGSSVTLGCLVKGFPESVTVTWNGSLSSSVHFPALTL 175  
 :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :||||| :  
 DB 121 vsastktpsviplapgsaktsqgtaalgclvkdypfpepyvtvsmgaltsgvhtfpavl 180

OY	176	Q-SGLTYMSSSVIVPSSSTMSPTGCVSAHNPASSTTVDDKLEPSGISININCPCPKCEH	234
Db	181	q9s9lyssivsvlvpsssjgctgycicnmvmbkpnckvdckvkpekscdkt-hccpp-----	234
OY	235	KCPAPNLEGSPSFIPEPPNKIDVIMLSTLPKYVCVVAVDSEDDPDQLSMFANNVEHTA	294
Db	235	-cpepellggpsvfllfpbkxctclmstrpcrcvcvvvdshbedpekflmwdydgvehvna	293
OY	295	QTOTHRREDVNSTIRAVYSTLDPIQHODMMSGKEFKCKYNNKDLSPIERTISKITGLVARPQ	354
Db	294	ktkpreeqnystyrvasvlvtlqhgdwlngkeyckysnkaklpalektiskakgprepq	353
OY	355	VYLIPPAEOLSKRDSLTCLQYGFNPGRDISVEMTNSNGHTENRYKDTAFVLDSDGSFYI	414
Db	354	vyltppreemtknqvsltlkvxgfypsdlaevewesngpenmykltcpvladsqsfily	413
OY	415	SKLNMTKSKWEKTDTSFCSNRHGGLKNYYLKRTISRSPGK	454
Db	414	skltvdksrtwggnvfscsvmhcalnhnytkqlsklsispk	453
RESULT	12		
ID	Y50157		
XX	Y50157	standard; Protein; 472 AA.	
AC	Y50157;		
XX			
DE	31-JAN-2000	(first entry)	
XX			
KW	Chimeric mouse/human F19 antibody heavy chain.		
KW	Antibody; monoclonal; F19; fibrinogen activation protein alpha; FAP;		
KW	humanisation; complementarity determining region; CDR; CDR grafting;		
KW	reactive stroma; fibroblast; epithelial cancer; diagnosis;		
KW	immune response; framework sequence; constant region;		
KW	variable region; producibility; treatment; cancer; colorectal; lung;		
KW	breast; head; neck; ovarian; lung; bladder; pancreatic; metastasis;		
KW	detection; wound healing; skin inflammation; tumour; immunogenicity;		
KW	chimeric; heavy chain.		
OS	Chimeric - Mus sp.		
XX			
OS	Chimeric - Homo sapiens.		
XX			
FH	Key	Location/Qualifiers	
FT	Peptide	1..19	
FT		/note= "Leader peptide"	
FT	Protein	20..472	
FT		/note= "Mature chimeric mouse/human F19 heavy chain"	
FT	Region	20..143	
FT		/note= "Mature mouse F19 heavy chain variable region"	
FT	Region	50..54	
FT		/note= "Complementarity determining region (CDR) 1"	
FT	Region	69..85	
FT		/note= "CDR 2"	
FT	Region	118..132	
FT		/note= "CDR 3"	
FT	Misc-difference	143..144	
FT		/note= "RNA splicing causes an Ala to be inserted between these residues"	
FT	Region	144..472	
FT		/note= "Human gamma-1 heavy chain constant region"	
XX			
PD	EP953639-A1.		
XX			
XX	03-NOV-1999.		
XX			
XX	30-APR-1998;	98EP-0107925.	
XX			
PR	30-APR-1998;	98EP-0107925.	
XX			
XX	(BOEH ) BOEHRINGER INGELHEIM INT GMBH.		
XX			
XI	Park JE, Garin-Chesa P, Bambergner U, Leger O, Saldanha J;		

Pt	Rettig WU.
xx	
DR	WPI: 1999-621833/54.
DR	N-PSDB: 232482.
xx	
Pt	New antibody protein, useful for treating cancer and for imaging
Pt	presence of activated stromal fibroblasts in healing wound or inflamed
Pt	Skin -
xx	
PS	Example 1; Fig 27; 143pp; English.
xx	
CC	This sequence represents the heavy chain of a chimeric mouse/human F19
CC	antibody. F19 (ATCC Accession number HB 8269) is a murine monoclonal
CC	antibody against fibroblast activation protein alpha (FAP). FAP is a cell
CC	surface molecule of reactive stromal fibroblasts, and its induction
CC	is a highly consistent molecular trait of the reactive stroma of many
CC	types of epithelial cancer. Although F19 may be useful in vitro, e.g.,
CC	for diagnosis, its applications for in vivo use in humans are problematic
CC	as it elicits a human anti-mouse response which reduces the efficacy of
CC	the antibody in patients and impairs continued administration. This
CC	chimeric antibody was humanised by joining entire murine variable regions
CC	to human constant regions. However, humanised antibodies produced by this
CC	method can still elicit an anti-mouse response in humans, whereas
CC	antibodies humanised via CDR (complementarity determining region)
CC	grafting are less immunogenic in humans. Humanised F19 antibodies are
CC	useful for treating cancers e.g., colorectal cancers, non-small cell
CC	lung cancers, breast cancers, head and neck cancers, ovarian cancers,
CC	lung cancers, bladder cancers, pancreatic cancers and metastatic cancers.
CC	They are also useful for the detection of activated stromal fibroblasts
CC	in a healing wound, inflamed skin or a tumour in a human patient.
CC	
SQ	Sequence 472 AA;
xx	
Query Match	63.9%; Score 1550.5; DB 20; Length 472;
Best Local Similarity	64.4%; Pred. NO.1e-92;
Matches 297; Conservative 62; Mismatches 87; Indels 15; Gaps 5;	
OY	1 EVLOOOSGPDELKPPASVAMISCRSAVFTEFTVMHWKSHGESLEWJGGINPYGGSGIF 60
Db	:     :     :     :     :     :     :     :     :     :
	20 evdvgqspelvtkpgasvkmseckterylfeytlmhwgshkslewjgginpmngidpy 79
OY	61 SPKFGRKATLVVDKSSSPAYMELRSITSEDSAVYYCARRAGAYVF-----DYWGQGTTL 114
Db	:     :     :     :     :     :     :     :     :     :     :
	80 nqfkfgatrltvkgkssstajmelrsltsedsavycarrilaygydeghamdywggtcv 139
OY	115 TVSSAKTRTPSYVPLARPGCGDTTGSSTVLGLCYKRGFPBSYVTVMNNGSLSSSVTFPAL 174
Db	:     :     :     :     :     :     :     :     :     :
	140 tvsss-tkypgsfpflarpskstsaggltaalgclvykdypdepylvsmnsgaltsqvltldpav 198
OY	175 LO-SCLYTMSSSVYPSSWTWPQSOTVTCGAHVASGTWDKRLEPSPGISTINPCPCKEC 233
Db	:     :     :     :     :     :     :     :     :     :
	199 lqsgsllyalsvsvytpsslsigtqltylcnvnhprstltkdkakwepyscdct-ftcp---- 253
OY	234 HKCPARNLEGGSVPFIFFPNIKDVLIMISLTFRKYTCVVVDVSDDDVOYSMEVNNEVHT 293
Db	:     :     :     :     :     :     :     :     :     :
	254 --cpepellqgsrvelffpkrkdtlmistrtpevtcvvvdvdshepvevkfnwydvgevh 311
OY	294 AQOTQHREDYNSTIIVYSTLPFOHODMMMSGKEFKKKVKNNKDLPSILERIKSLKGLVARP 353
Db	:     :     :     :     :     :     :     :     :     :
	312 aktkpreeqnslylvsvlvtlvhdwllngkyekkkvsnklaipadilektiskakqgrpt 371
OY	354 QVYLIPPAEQLSRKDVSITGLVWFENFGDISVEVMTSNGTHPEANKDPADPVLDSDGSFYI 413
Db	:     :     :     :     :     :     :     :     :     :
	372 qyytltpsrreentkvqvaltcvlxkfypedialaveesngpennyktcpvdladsgsfli 431
OY	414 YSKLMKTSKWEKTDSPSCNVNRHEGLKNYYLKRTISRSPGK 454
Db	:     :     :     :     :     :     :     :     :     :
	432 yskltlvdkstrwgnvafscsymhaalhmhytgktsislspgk 472
RESULT	13
	866758





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